

[illegible]

10. *Chlorophyll a* (Chl *a*) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue and red regions of the visible spectrum. Chl *a* is located in the thylakoid membranes of chloroplasts. It plays a central role in the light reactions of photosynthesis, where it captures light energy and converts it into chemical energy in the form of ATP and NADPH. The structure of Chl *a* consists of a central magnesium atom coordinated by four nitrogen atoms in a porphyrin-like ring, with a long phytol side chain attached to one of the ring carbons.